



Air Quality Permitting Statement of Basis

April 25, 2006

Permit to Construct No. P-050035

**FIBERGLASS SYSTEMS INC.
KUNA, ID**

Facility ID No. 001-00179

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PUBLIC COMMENT

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Acronyms, Units, and Chemical Nomenclatures

AFS	AIRS Facility Subsystem
AIRS	Aerometric Information Retrieval System
AQCR	Air Quality Control Region
ASTM	American Society for Testing and Materials
BACT	Best Available Control Technology
CAA	Clean Air Act
CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Department of Environmental Quality
dscf	dry standard cubic feet
EPA	U.S. Environmental Protection Agency
HAPs	Hazardous Air Pollutants
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
km	kilometer
lb/hr	pound per hour
m	meter(s)
MACT	Maximum Achievable Control Technology
MMBtu	million British thermal units
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO ₂	nitrogen dioxide
NO _x	nitrogen oxides
NSPS	New Source Performance Standards
PM	particulate matter
PM ₁₀	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
ppm	parts per million
PSD	Prevention of Significant Deterioration
PTC	permit to construct
PTE	potential to emit
Rules	Rules for the Control of Air Pollution in Idaho
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SM	Synthetic Minor
T/yr	tons per year
UTM	Universal Transverse Mercator
VOC	volatile organic compound

1. PURPOSE

The purpose for this memorandum is to satisfy the requirements of IDAPA 58.01.01.200, Rules for the Control of Air Pollution in Idaho, for issuing permits to construct.

2. FACILITY DESCRIPTION

Fiberglass Systems manufactures of fiberglass reinforced plastic bathroom products.

3. FACILITY / AREA CLASSIFICATION

The facility is defined as a major facility in accordance with IDAPA 58.01.01.008.10 for Tier I permitting purposes because the facility has the potential to emit (PTE) HAP and VOC at over 25/10 and 100 T/yr, respectively. The facility is not a Prevention of Significant Deterioration (PSD) major source because emissions do not exceed the PSD threshold of 250 T/yr. The AIRS classification is “A” because potential emissions of HAPs exceed 10 for styrene and 25 T/yr for total HAPs, and VOC emissions are greater than 100 T/yr.

The facility is located in Ada County, in Air Quality Control Region 64, and Zone 11. The area classification is attainment for PM₁₀, CO, and all federal and state criteria air pollutants.

The AIRS information provided in Appendix A defines the classification for each regulated air pollutant at the facility. This required information is entered into the EPA AIRS database.

4. APPLICATION SCOPE

The facility has proposed to exhaust emissions from manufacturing from three stacks, instead of one. This change is strictly an energy saving measure. Instead of exhausting emissions from all processes simultaneously, the change allows the facility to exhaust emissions from only those processes in operation. The facility has not requested a change in emission rates or permit conditions with this proposed project. The permitting also updated the permit to include the requirements of 40 CFR 63, Subpart WWW, National Emissions Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production.

4.1 Application Chronology

July 12, 2005	DEQ received application
August 10, 2005	DEQ determined application complete
September 15, 2005	Initial draft permit and statement of basis sent to Boise Regional Office
April 25, 2006	Proposed permit issued for public comment

5. PERMIT ANALYSIS

This section of the Statement of Basis describes the regulatory requirements for this PTC action:

5.1 Equipment Listing

This proposed project involves the change from one stack, Stack EF-1, to 3 smaller stacks, Stacks EF-1 through EF-3. The specification of the new stacks are as follows:

Stack EF-1	38" diameter 31' above grade 40,000 ft ³ /min flowrate
Stack EF-2	36" diameter 31' above grade 36,000 ft ³ /min flowrate
Stack EF-2	30" diameter 31' above grade 20,000 ft ³ /min flowrate

5.2 Emissions Inventory

The proposed project does not involve a change in emissions. No emission inventory was submitted, or developed.

5.3 Modeling

There is no increase in emissions associated with this permit revision; however, modeling was performed to address the new location of Stacks EF-1 through EF-3, and its effects on concentration of TAPs that were modeled as a result of the facility's previous permitting action. PM₁₀ emissions were not modeled because previous modeling demonstrated that facility would not exceed significant contribution levels. Screen 3, version 5.00, was used to perform the modeling analysis, and to provide the most conservative modeled concentration. The emission limits of styrene, methylene chloride, MEK peroxide were used as the emission rate inputs for the modeling analysis. The lb/hr emission rate of methylene chloride was determined by dividing the T/yr emission limit by 8760 hrs/yr and multiplying the result by 2000 lbs/T to yield the corresponding lb/hr emission rate. The results of the modeling analysis demonstrate to DEQ's satisfaction that the proposed project will not cause or contribute to a violation of any ambient air quality standard.

Table 5.1 MODELING RESULT SUMMARY

Pollutant	Averaging Period	Modeled Concentration (µg/m ³)	AAC/AACC (µg/m ³)	Exceeds the AAC (Y or N)
Methyl ethyl ketone peroxide	24hr	0.053	7.5	N
Methylene chloride	Annual	0.019	0.024	N
Styrene	24	894	1000	N

Table 5.2 POINT SOURCE & BUILDING PARAMETERS

Building Height (ft)	Building Length (ft)	Building Width (ft)	Stack Height (ft)	Modeled Stack Diameter (ft)	Stack Gas Flow Temperature (F°)	Stack Gas Flow Velocity (ft/sec)
566226	5087808	991.9	31	2.89	72	81.305

Table 5.3 MODEL SETTINGS

Source Type	Terrain	Fumigation	Rural/ Urban	Metereology Stability/ Wind Speed	Ambient Temp. (°F)	Mixing Height (ft)	Anemometer (ft)
Point	Flat	Inversion Break-up	Rural	All Stab. & WS	68	Regulatory	32.8084

5.4 Regulatory Review

This section describes the regulatory analysis of the applicable air quality rules with respect to this PTC.

IDAPA 58.01.01.209.04.....Revisions to Permits to Construct

This rule establishes the requirements for permit revisions.

40 CFR 63, Subpart WWWW.....National Emission Standards for Hazardous Air Pollutants for Reinforced Plastic Composites Production

This subpart establishes national emissions standards for hazardous air pollutants (NESHAP) for reinforced plastic composites production. This subpart also establishes compliance options, operating requirements, and work practice requirements to demonstrate initial and continuous compliance with the hazardous air pollutants (HAP) emissions standards for open molding, polymer casting, mixing, and cleaning of equipment procedures used in reinforced plastic composites manufacture. The requirements of this subpart apply to this facility because the facility-wide HAP emissions of the facility exceed major source thresholds.

5.5 Permit Conditions Review

This section describes only those permit conditions that have been revised, modified or deleted as a result of this permit action. All other permit conditions remain unchanged.

Permit Conditions 2.1 and 2.2 have been revised to state that the spray booths exhaust from Stacks EF-1, EF-2, and EF-3. Permit Conditions 2.1 and 2.2 formerly stated that the spray booths exhausted from Stack EF-1.

Compliance with visible emission requirements of Permit Condition 2.5 shall be demonstrated through Permit Conditions 2.8, 2.10, 2.31, 2.35, 2.37, 2.39, 2.57, 2.62, and 2.63.

Compliance with the fugitive emissions requirements of Permit Condition 2.6 shall be demonstrated through Permit Conditions 2.9, 2.10, 2.11, 2.31, 2.35, 2.40, 2.57, 2.62 and 2.63.

Compliance with the odor requirements of Permit Condition 2.7 shall be demonstrated through Permit Conditions 2.9, 2.36, 2.57, 2.62 and 2.63.

Permit Condition 2.3 has been revised to include the emission limits formerly contained in Appendix A of the old PTC. Appendix A now contains the requirements formerly in Appendix B of the old PTC.

Compliance with the VOC emission limits of Permit Condition 2.3 shall be demonstrated through Permit Conditions 2.10, 2.31, 2.32, 2.34, 2.57, 2.62, and 2.63.

Compliance with the HAP emission limits of Permit Condition 2.3 shall be demonstrated through Permit Conditions 2.10, 2.31, 2.32, 2.33, 2.38, 2.41, 2.57 through 2.60, 2.62 and 2.63.

Compliance with the HAP emissions limits of Permit Condition 2.4 shall be demonstrated through calculation procedures Permit Conditions 2.12 through 2.25, the work practice requirements of Permit Condition 2.26 through 2.30, the monitoring requirements of Permit Condition 2.42 through 2.44, the determination of HAP content requirements of Permit Condition 2.45 through 2.48, the recordkeeping requirements of Permit Condition 2.49 through 2.56, and the reporting requirements of Permit Condition 2.61 through 2.66.

6. PERMIT FEES

A PTC processing fee of \$250 is due for this permit revision.

7. PERMIT REVIEW

7.1 *Regional Review of Draft Permit*

A draft copy of the permit and statement of basis was provided to the Boise Regional Office on September 15, 2005. Comments were received and addressed on September 15, 2005.

7.2 *Public Comment*

An opportunity for public comment period on the PTC application was provided in accordance with IDAPA 58.01.01.209.01.c. During this time, there were no comments on the application. A request for a public comment period, however, on DEQ's proposed action was submitted.

8. RECOMMENDATION

Based on review of application materials, and all applicable state and federal rules and regulations, staff recommends that Fiberglass Systems be issued a proposed PTC No. P-050035 for the relocation and addition of three smaller stacks at the facility, and inclusion of 40 CFR 63, Subpart WWW.

AC/bf Permit No. P-050035

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Appendix A

AIRS Information

P-050035

AIRS/AFS^a FACILITY-WIDE CLASSIFICATION^b DATA ENTRY FORM

Facility Name: FIBERGLASS SYSTEMS INC.

Facility Location: KUNA, ID

AIRS Number: 001-00179

AIR PROGRAM POLLUTANT	SIP	PSD	NSPS (Part 60)	NESHAP (Part 61)	MACT (Part 63)	SM80	TITLE V	AREA CLASSIFICATION A-Attainment U-Unclassified N- Nonattainment
SO ₂	B							
NO _x	B							
CO	B							
PM ₁₀	B							
PT (Particulate)	B							
VOC	A						A	
THAP (Total HAPs)	A				A		A	
			APPLICABLE SUBPART					
					WWW			

^a Aerometric Information Retrieval System (AIRS) Facility Subsystem (AFS)

^b AIRS/AFS Classification Codes:

- A = Actual or potential emissions of a pollutant are above the applicable major source threshold. For HAPs only, class "A" is applied to each pollutant which is at or above the 10 T/yr threshold, **or** each pollutant that is below the 10 T/yr threshold, but contributes to a plant total in excess of 25 T/yr of all HAPs.
- SM = Potential emissions fall below applicable major source thresholds if and only if the source complies with federally enforceable regulations or limitations.
- B = Actual and potential emissions below all applicable major source thresholds.
- C = Class is unknown.
- ND = Major source thresholds are not defined (e.g., radionuclides).